

UTILITY PATENT APPLICATION TRANSMITTAL (Large Entity)

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Docket No.
12990(SZ998-043)

Total Pages in this Submission
3

TO THE ASSISTANT COMMISSIONER FOR PATENTS

Box Patent Application
Washington, D.C. 20231

Transmitted herewith for filing under 35 U.S.C. 111(a) and 37 C.F.R. 1.53(b) is a new utility patent application for an invention entitled:

METHOD OF INTERCONNECTING COMPUTERS AND COMPUTER NETWORK

and invented by:

Heiko H. Ludwig, Keith G. Whittingham

If a **CONTINUATION APPLICATION**, check appropriate box and supply the requisite information:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: _____

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Enclosed are:

Application Elements

1. ☒ Filing fee as calculated and transmitted as described below
2. ☒ Specification having 23 pages and including the following:
 - a. ☒ Descriptive Title of the Invention
 - b. ☐ Cross References to Related Applications (if applicable)
 - c. ☐ Statement Regarding Federally-sponsored Research/Development (if applicable)
 - d. ☐ Reference to Microfiche Appendix (if applicable)
 - e. ☒ Background of the Invention
 - f. ☒ Brief Summary of the Invention
 - g. ☒ Brief Description of the Drawings (if drawings filed)
 - h. ☒ Detailed Description
 - i. ☒ Claim(s) as Classified Below
 - j. ☒ Abstract of the Disclosure

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Application Elements (Continued)

3. ☒ Drawing(s) (when necessary as prescribed by 35 USC 113)
- a. ☒ Formal Number of Sheets 1
- b. ☐ Informal Number of Sheets _____
4. ☒ Oath or Declaration
- a. ☒ Newly executed (original or copy) ☐ Unexecuted
- b. ☐ Copy from a prior application (37 CFR 1.63(d)) (for continuation/divisional application only)
- c. ☒ With Power of Attorney ☐ Without Power of Attorney
- d. ☐ DELETION OF INVENTOR(S)
Signed statement attached deleting inventor(s) named in the prior application,
see 37 C.F.R. 1.63(d)(2) and 1.33(b).
5. ☐ Incorporation By Reference (usable if Box 4b is checked)
The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied
under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby
incorporated by reference therein.
6. ☐ Computer Program in Microfiche (Appendix)
7. ☐ Nucleotide and/or Amino Acid Sequence Submission (if applicable, all must be included)
- a. ☐ Paper Copy
- b. ☐ Computer Readable Copy (identical to computer copy)
- c. ☐ Statement Verifying Identical Paper and Computer Readable Copy

Accompanying Application Parts

8. ☒ Assignment Papers (cover sheet & document(s))
9. ☐ 37 CFR 3.73(B) Statement (when there is an assignee)
10. ☐ English Translation Document (if applicable)
11. ☐ Information Disclosure Statement/PTO-1449 ☐ Copies of IDS Citations
12. ☐ Preliminary Amendment
13. ☒ Acknowledgment postcard
14. ☒ Certificate of Mailing
- ☐ First Class ☒ Express Mail (Specify Label No.): EL286464750US

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Accompanying Application Parts (Continued)

15. ☐ Certified Copy of Priority Document(s) *(if foreign priority is claimed)*

16. ☒ Additional Enclosures *(please identify below):*

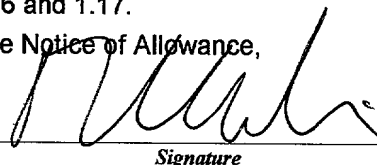
Claim of Priority - to be submitted in due course

Fee Calculation and Transmittal

CLAIMS AS FILED

For	#Filed	#Allowed	#Extra	Rate	Fee
Total Claims	18	- 20 =	0	x \$18.00	\$0.00
Indep. Claims	2	- 3 =	0	x \$78.00	\$0.00
Multiple Dependent Claims (check if applicable) <input type="checkbox"/>					\$0.00
BASIC FEE					\$760.00
OTHER FEE (specify purpose) <u>Recordation of Assignment</u>					\$40.00
TOTAL FILING FEE					\$800.00

- ☐ A check in the amount of _____ to cover the filing fee is enclosed.
- ☒ The Commissioner is hereby authorized to charge and credit Deposit Account No. 50-0510/IBM as described below. A duplicate copy of this sheet is enclosed.
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 - ☐ Charge the issue fee set in 37 C.F.R. 1.18 at the mailing of the Notice of Allowance, pursuant to 37 C.F.R. 1.311(b).



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Dated: November 4, 1999

CC:

CERTIFICATE OF MAILING BY "EXPRESS MAIL" (37 CFR 1.10)Applicant(s): **Heiko H. Ludwig, et al.**

Docket No.

12990(SZ998-043)

Serial No.

Unassigned

Filing Date

Herewith

Examiner

Unassigned

Group Art Unit

UnassignedInvention: **METHOD OF INTERCONNECTING COMPUTERS AND COMPUTER NETWORK**I hereby certify that this **New Patent Application***(Identify type of correspondence)*

is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 in an envelope addressed to: The Assistant Commissioner for Patents, Washington, D.C. 20231

on **November 4, 1999***(Date)***Mishelle Spina***(Typed or Printed Name of Person Mailing Correspondence)**(Signature of Person Mailing Correspondence)***EL286464750US***("Express Mail" Mailing Label Number)***Note: Each paper must have its own certificate of mailing.**

METHOD OF INTERCONNECTING COMPUTERS AND COMPUTER NETWORK

Background of the Invention

Technical Field

5 The present invention generally relates to the art of
connecting computers and specifically to a method of
interconnecting at least two server computers, generally
10 pertaining to differing corporate entities; each server
being connected with a least one client computer and
including, or having access to, a workflow control
application.

Prior Art

Workflow control means and applications are well known in
the art and operate with different media. Typical
electronic workflow control applications (also termed
Workflow Management System or WfMSs) are available
20 commercially in various types and from various sources,
e.g. in the form of specialized systems, such as "MQ
Series Workflow®" from IBM or "TeamFlow®" from ICL, or as
parts of so-called Enterprise Resource Planning Systems,
such as R3® by SAP and Baan® by the Baan Company.

25 Today's systems of this type do not distinguish between
and external view of a process that is visible outside
the organization and its internal details. Their
interfaces are generally aimed at the internal user.
30 This is a problem if one organization (provider
corporation) wants to perform a process on behalf of
another (requestor corporation) so that it can be

initiated and accessed by the requestor corporation through an automated interface and, vice versa, so that results generated by the provider can be reported back to the requestor.

5

10

This issue gains importance; specifically, an increasing need to outsource non-core business leads to increased service activity between separate companies. However, business organizations do not normally want to make internal information available to business partners nor do they wish to restrict their ability to conduct business internally. If separate organizations enter into a business relation, they will normally conclude an agreement or contract defining the circumstances under which the requestor corporation might initiate a process in the provider corporation and exchange further information when performing the process. As used herein, the term "contract" is a description of mutual obligations in the form of a protocol.

15

20

The use of server computers running a workflow control application in one and the same organization has been an issue for some time. Organizations want to deploy more than one server to balance workloads or to provide service at different sites that are connected by low bandwidth or only intermittently. If several servers are used, process templates have to be distributed as well as states and data of processes and activities. The various distributed parts have to be kept consistent. This problem has been discussed and described in the art; some solutions have been implemented in commercial products, such as IBM's MQ Series Workflow® mentioned above.

25

30

For the purpose of this specification, the terms "server" and "server computer" are used synonymously and refer to an electronic computer which functions as a "host" computer and is capable of being operatively connected with one or more "clients" (short for "client computer"). The connection of a server and at least one client results in a "net" (short for interconnected electronic computers).

A related issue is interoperability between workflow control applications of different vendors. Grown computer infrastructures tend to be heterogenous. This is a problem of providing standard interfaces to workflow control applications for server-to-server communication. Various attempts have been made at defining such an interface, e.g. by the 'Workflow Management Coalition', (a consortium of workflow control application vendors and users) which has created an interface called Interface 4 (cf. Technical Report WfMC-TC-1013, edited by the Workflow Management Coalition (1995), Hampshire, England). The term "interface" is used to refer to a physical or virtual means capable of causing operative interconnection connection of physical and/or virtual entities.

These known interfaces help to cross vendor boundaries but do not cross corporate limits. Notably, such issues as privacy, flexibility and independence are not addressed because the relationship between internal (i.e. inter-corporate) and external (i.e. intra-corporate) interfaces is not a subject of such interfaces.

Another prior art attempt, i.e. the 'Wide Area Groupflow' system (cf. Nastanski et al; "Managing business process in virtual enterprises- interaction of distributed workflow mangament systems"; *Proceedings of the ESTIEM, IT-Vision Conference, Paderborn (1997)*; and Riempp, G., et al, "Workflow management between distributed organizations-the wide area groupflow approach", in Lehner et. Al(ed.) *Proceedings of the ESTIEM, IT-Vision Conference; Deutscher Universitätsverlag, Wiesbaden 1997*) suggests to connect processes across organizational boundaries. While this approach addresses the issue of privacy, it requires that the organizations declare process templates as externally accessible. As a consequence, this approach does not provide a means to map an external representation of a process to an internal one, which implies a loss of independence and flexibility.

Agreements and contracts are known per se in various fields of transactions, workflow management, and distributed systems in general: A first prior art contract approach (cf. Wächter, H. Et al; "The ConTract Model", in Elmagarmid, A.K. (ed.) *Database Transaction Models for Advanced Applications*, San Mateo 1991) enables a performance of long-lived transactions of the type that can be perceived as processes, by committing, at an early stage, those parts of a transaction for which compensation mechanisms have been agreed upon.

Another prior art system termed "Coyote Approach" provides similar mechanisms while explicitly taking into account that services as parts of transactions can be

executed in different organizations (cf. Dan, A. et al,
"The Coyote Approach for Network-centric Service
Applications; *Proceedings of the Workshop on High
Performance Transaction Processing HPTP, Asilomar 1997*).
5 The external services contemplated in this approach are
short-lived, however. Similar properties are provided by
the more recent TOWEC Approach (Verharen, E.M. et al,
"Introducing contracting in distributing transactional
workflow" in *Proceedings of the 31st Annual Hawaii
10 International Conference on System Science*, New York
1998); it allows closing contracts for process-type
transaction steps rated 'very important'.

Summary of the invention

15 Now, the present invention is concerned with combining a
contract approach with what is called a virtual
enterprise co-ordinator (also termed VEC for short
herein) explained in more detail below and developed to
20 enrich such agreements by expressions for failure-
responsibility of a process and to supervise these
enriched agreements in the connector application having
the function of a gateway. However, none of these
approaches addresses terminology issues.

25 Accordingly, the present invention is directed to an
improved method for interconnecting at least two server
computers of different corporations, each of which is
connected with at least one client computer, and wherein
30 each server runs a workflow control application which
may, but need not, be the same, and to solve the

terminology problem to guard privacy and independence of operation.

5 The present invention is further directed to a computer network comprising at least two server computers each of which is connected with a least one client computer, and wherein each server computer is running a workflow control application.

10 Brief Description of the Drawings

Preferred embodiments of the present invention will now be described, by way of example only, with reference to the accompanying drawings in which:

15 Fig.1 shows a simple schematic view of interconnected server computers running workflow management system applications; and

20 Fig.2 shows a schematic view of parameter mapping of work tasks.

25 Detailed Description of the Preferred Embodiment of the Invention

30 Now, according to a first embodiment the invention provides a method of interconnecting a first server computer of a service requestor and a second server computer of a service provider, each of said first server computer and said second server computer being connected to at least one client computer said first server

computer running a first workflow management system application, and said second server computer running a second workflow management system application, said method comprising providing a first and a second connector application for permitting said first server computer access to a copy of said first connector application and for permitting said second server computer access to a copy of said second connector application, wherein said copies of said first and said second connector application each comprises a connection agreement for a first work task of a first workflow instance encompassed by said first workflow management system application which copy of said first connector application further comprises a first mapping table including a first service terminology and a common terminology, and which copy of said second connector application further comprises a second mapping table including a second service terminology and said common terminology, said first work task being transposed by said first mapping table from said first service terminology into an input data set in said common terminology, said input data set being marshalled to said second server computer over a common connection, and said marshalled input data set being transposed to a second work task by said second mapping table from said common terminology into said second service terminology, and said second work task being processed by said workflow management system application.

According to a second embodiment, the invention provides a computer network comprising a first server computer of a service requestor and a second server computer of a

service provider, each of said first server computer and
said second server computer being connected to at least
one client computer, said first server computer running a
first workflow management system application, and said
5 second server computer running a second workflow
management system application, said first and second
server computer being interconnected by means of a first
and a second connector application arranged in such a
manner that said first server computer having access to a
10 copy of said first connector application and said second
server computer having access to a copy of said second
connector application, wherein said first and said second
connector application each comprises a connection
agreement for a first work task of a first workflow
15 instance encompassed by said first workflow management
system application, which copy of said first connector
application further comprises a first mapping table
including a first service terminology and a common
terminology, and which copy of said second connector
20 application further comprises a second mapping table
including a second service terminology and said common
terminology said first work task being transposed by said
first mapping table from said first service terminology
into an input data set in said common terminology, said
25 input data set being marshalled to said second server
computer over a common connection, and said marshalled
input data set being transposed to a second work task by
said second mapping table from said common terminology
into said second service terminology, and said second
30 work task being processed by said second workflow
management system application.

According to a preferred embodiment, the results of the second work task of the second workflow management system application are transposed by the second mapping table from the second service terminology into an output data set in the common terminology, wherein the mapped output data set is marshalled to the first server computer over the common connection, and the marshalled output data are transposed by the first mapping table from said common terminology into said first service terminology.

According to another preferred embodiment, the first and second connector applications reside in a first and second access device of the service requestor and the service provider, wherein each access device comprises an access computer including the connector applications.

In a further preferred embodiment of the invention, the connector applications reside in the server computers of the service requestor and the service provider.

According to another preferred embodiment the connector applications reside in the client computers, which are connected to the service requestor server computer and to the service provider server computer.

The following description references Fig.1. The service requestor organization 1 has service requestor server computer 112 with a workflow management system application (WfMS) 3 and one variant of an Access Device: 5 the Service Requestor's Access Device. The service provider 2 has service provider server computer 122 with

a WfMS 4 and the other variant of an Access Device: 6 the Service Provider's Access Device.

Before a work task of a service requestor 1 can be outsourced to a service provider, several operations must be completed:

- an accord between a service requestor and a service provider must be established either verbally in written form or by some other means,
- a workflow template must be established in the service requestor's WfMS 3 with one of the workflow's sub-tasks representing a work task 7 to be outsourced,
- a workflow template 15 must be established in the service provider's WfMS 4 to represent the processing of the whole outsourced work task 15,
- a connection agreement must be created and a copy is stored in the service requestor's Access Device 8 and the service provider's Access Device 12,
- mapping tables 9 and 13 describing how to map data items described in the workflow templates to data items described in the connection agreement are created and stored in the service requestor's Access Device 9 and the service provider's Access Device 13.

Once the above criteria have been established, the system is capable of outsourcing tasks. The following text is an overview of successfully processing a single outsourcing task using a previously established connection agreement 8 and 12 as described above. The

device allows many instances of such a process using the same or different connection agreements to run concurrently.

5 A workflow instance 18 of a workflow template is created. Using a workflow interface 11 provided by the WfMS 3 the service requestor's Access Device 5 detects when the workflow reaches a point where it is appropriate to request the service provider to perform the outsourced
10 work task 7. The correct connection agreement 8 is located, this indicates the details of the service provider 2 and the relevant data mapping table 9. According to this, information data is retrieved from the workflow instance 18 and marshalled into a format that
15 can be interpreted by the service provider's Access Device; this is termed the input data ip1, ip2 (see also Fig.2). The request to start the outsourced task together with said input ip1, ip2 is passed across a computer network 17 to the service provider's Access
20 Device 6. On receiving the request the service provider's Access Device locates it's copy of the connection agreement 12; this indicates the mapping table 13 to use to marshal the input data and the name of a workflow template 15 for the outsourced task. The service
25 provider's Access Device marshals the input data into the form defined in the workflow template using the mapping table 13. The service provider's Access Device then starts a new workflow instance 19 of the workflow template 15 using the WfMS workflow client computer
30 interface 16. A connection record 14 is created and stored in persistent memory.

5 The service provider's Access Device 6 detects the
completion of the workflow instance 19 using the workflow
client computer interface 16 to the WfMS 4; the
completion code and any output data of the workflow
instance is retrieved. The connection record 14 is used
to retrieve the mapping table 13 that is in turn used to
marshal the data into the format that can be interpreted
by the service requestor's Access Device 5, this is said
to be the output data op1, op2. Said output data op1,
op2 is then sent to the service requestor's Access Device
across the computer network 17. The connection record 14
is removed from the system. On receiving the
notification from the service provider's Access Device
the service requestor's Access Device 5 retrieves the
respective connection record 10. The connection record
allows the correct mapping table 9 to be retrieved and
used to translate the output data into the format define
by the workflow template 7. The completion of the
outsourced task is signalled and said translated data is
passed to the WfMS 3 using the workflow client computer
interface 11.

25 The mapping tables 9 and 13 for the purposes of this
invention are described in more detail with reference to
Fig. 2:

30 The mapping table 9 of the service requestor maps the
work task 7 from a first service terminology 9a into
common terminology 9b. The result of this mapping are
the input data ip1 and ip2, which are marshalled over the
connection 17 to the mapping table 13 of the service
provider. The mapping table 13 of the service provider

maps the input data ip1, ip2 from the common terminology
 13b to the second service terminology 13a for the work
 task 15 of the service provider. The result of the work
 task 15 of the service provider is mapped by the mapping
 5 table 13 of the service provider from the second service
 terminology 13a to common terminology 13b. This mapped
 result comprises the output data op1, op2 which are
 marshalled to the mapping table 9 of the service
 requestor. This mapping table 9 maps the output data
 10 op1, op2 from common terminology 9b to the first service
 terminology 9a, which output data serve as a result of
 the outsourced work task 7.

The inventions as described above allows the service
 15 requestor and the service provider to save privacy,
 flexibility and independence as follows:

Privacy: All communication from a process of sub-process
 to the outside or vice versa is sent through and
 20 controlled by the connection applications. No direct
 interaction between workflow control application of
 different organizations takes place. No information
 will be exchanged beyond what has been specifically
 defined in the agreement according to which the process
 25 and sub-process are connected.

Flexibility: By mapping the common view of a sub-process
 onto the respective internal representations, both
 organizations are free to modify on both individual and
 30 template level. However, an internal modification might
 entail the requirement for an organization to also
 change its mapping.

Claims

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent is:

1 1. A method of interconnecting a first server computer
2 (112) of a service requestor (1) and a second server
3 computer (122) of a service provider (2), each of said
4 first server computer (112) and said second server
5 computer (122) being connected to at least one client
6 computer (111, 121);

7 said first server computer (112) running a first
8 workflow management system application (3), and said
9 second server computer (122) running a second workflow
10 management system application (4);

11 said method comprising providing a first and a second
12 connector application (5a, 6a) for permitting said first
13 server computer (112) access to a copy of said first
14 connector application (5a) and for permitting said
15 second server computer (122) access to a copy of said
16 second connector application (6a);

17 wherein said copies of said first and said second
18 connector application (5a, 6a) each comprises a
19 connection agreement (8, 12) for a first work task (7)
20 of a first workflow instance (18) encompassed by said
21 first workflow management system application (3);

22 which copy of said first connector application (5a)
23 further comprises a first mapping table (9) including a

24 first service terminology (9a) and a common terminology
 25 (9b, 13b), and which copy of said second connector
 26 application (6a) further comprises a second mapping
 27 table (13) including a second service terminology (13a)
 28 and said common terminology (9b, 13b);

29 said first work task (7) being transposed by said first
 30 mapping table (9) from said first service terminology
 31 (9a) into an input data set (ip1, ip2) in said common
 32 terminology (9b, 13b);

33 said input data set (ip1, ip2) being marshalled to said
 34 second server computer (122) over a common connection
 35 (17), and said marshalled input data set (ip1, ip2) being
 36 transposed to a second work task (15) by said second
 37 mapping table (13) from said common terminology (9b, 13b)
 38 into said second service terminology (4a), and said
 39 second work task (15) being processed by said second
 40 workflow management system application (4).

1 2. The method of claim 1 wherein said processed second
 2 work task (15) generates a result (wo1, wo2), said result
 3 (wo1, wo2) being transposed by said second mapping table
 4 (13) from said second service terminology (13a) into an
 5 output data set (op1, op2) in said common terminology
 6 (9b, 13b), said mapped output data set (op1, op2) being
 7 marshalled to said first server computer (112) over said
 8 common connection (17), and said marshalled output data
 9 being transposed by said first mapping table (9) from
 10 said common terminology (9b, 13b) into said first service
 11 terminology (9a).

1 3. The method of claim 1 wherein said copy of said first
2 connector application (5a) resides in a first access
3 device (5) of said service requestor (1); said first
4 access device (5) comprising a first access computer
5 including said first connector application (5a).

1 4. The method of claim 1 wherein said copy of said
2 second connector application (6a) resides in a second
3 access device (6) of said service provider (2); said
4 second access device (6) comprising a second access
5 computer including said second connector application
6 (6a).

1 5. The method of claim 1 wherein said copy of the first
2 connector application (5a) resides in said first server
3 computer (112) of said service requestor (1).

1 6. The method of claim 1 wherein said copy of the second
2 connector application (6a) resides in said second server
3 computer (122) of said service provider (2).

1 7. The method of claim 1 wherein said copy of said first
2 connector application (5a) resides in said first client
3 computer (111).

1 8. The method of claim 1 wherein said copy of said
2 second connector application (6a) resides in said second
3 client computer (121).

1 9. The method of claim 1 wherein said first workflow
2 management system application (3) is essentially the same

3 as said second workflow management system application
4 (4).

1 10. A computer network comprising a first server
2 computer (112) of a service requestor (1) and a second
3 server computer (122) of a service provider (2), each of
4 said first server computer (112) and said second server
5 computer (122) being connected to at least one client
6 computer (111, 121);

7 said first server computer (112) running a first workflow
8 management system application (3), and said second server
9 computer (122) running a second workflow management
10 system application (4);

11 said first and second server computer (112, 122) being
12 interconnected by means of a first and a second connector
13 application (5a, 6a) arranged in such a manner that said
14 first server computer (112) having access to a copy of
15 said first connector application (5a) and said second
16 server computer (122) having access to a copy of said
17 second connector application (6a);

18 wherein said first and said second connector application
19 (5a, 6a) each comprise a connection agreement (8, 12) for
20 a first work task (7) of a first workflow instance (18)
21 encompassed by said first workflow management system
22 application (3);

23 which copy of said first connector application (5a)
24 further comprises a first mapping table (9) including a
25 first service terminology (9a) and a common terminology

26 (9b, 13b), and which copy of said second connector
 27 application (6a) further comprises a second mapping table
 28 (13) including a second service terminology (13a) and
 29 said common terminology (13b);

30 said first work task (7) being transposed by said first
 31 mapping table (9) from said first service terminology
 32 (9a) into an input data set (ip1, ip2) in said common
 33 terminology (9b, 13b);

34 said input data set (ip1, ip2) being marshalled to said
 35 second server computer (122) over a common connection
 36 (17), and said marshalled input data set (ip1, ip2) being
 37 transposed to a second work task (15) by said second
 38 mapping table (13) from said common terminology (9b, 13b)
 39 into said second service terminology (13a), and said
 40 second work task (15) being processed by said second
 41 workflow management system application (4).

1 11. The network of claim 10 wherein said processed
 2 second work task (15) generates a result (wo1, wo2), said
 3 result (wo1, wo2) being transposed by said second mapping
 4 table (13) from said second service terminology (13a)
 5 into an output data (op1, op2) in said common terminology
 6 (9b, 13b), said mapped output data set (op1, op2) being
 7 marshalled to said first server computer (112) over said
 8 common connection (17), and said marshalled output data
 9 being transposed by said first mapping table (9) from
 10 said common terminology (9b, 13b) into said first service
 11 terminology (2a).

1 12. The network of claim 10 wherein said copy of said
2 first connector application (5a) resides in a first
3 access device (5) of said service requestor (1), which
4 first access device (5) comprises a first access computer
5 including said first connector application (5a).

1 13. The network of claim 10 wherein said copy of said
2 second connector application (6a) resides in a second
3 access device (6) of said service provider (2), which
4 second access device (6) comprises a second access
5 computer including said second connector application
6 (6a).

1 14. The network of claim 10 wherein said copy of the
2 first connector application (5a) resides in said first
3 server computer (112) of said service requestor (1).

1 15. The network of claim 10 wherein said copy of the
2 second connector application (6a) resides in the second
3 server computer (122) of said service provider (2).

1 16. The network of claim 10 wherein said copy of said
2 first connector application (5a) resides in said first
3 client computer (111).

1 17. The network of claim 10 wherein said copy of said
2 second connector application (6a) resides in said second
3 client computer (121).

1 18. The network of claim 10 wherein said first workflow
2 management system application (3) is essentially the same

3 as said second workflow management system application
4 (4) .

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METHOD OF INTERCONNECTING COMPUTERS AND COMPUTER NETWORK

Abstract of the Disclosure

5 A method and a computer network for interconnecting a first server computer (112) of a service requestor (1) and a second server computer (122) of a service provider (2), each of the first server computer (112) and the
10 second server computer (122) being connected to at least one client computer (111, 121), the first server computer (112) running a first workflow management system application (3), and the second server computer (122) running a second workflow management system application (4), the method comprising providing a first and a second
15 connector application (5a, 6a) for permitting the first server computer (112) access to a copy of the first connector application (5a) and for permitting the second server computer (122) access to a copy of the second connector application (6a), wherein the copies of the first and the second connector application (5a, 6a) each comprises a connection agreement (8, 12) for a first work
20 task (7) of a first workflow instance (18) encompassed by the first workflow management system application (3), which copy of the first connector application (5a) further comprises a first mapping table (9) including a first service terminology and a common terminology, and which copy of the second connector application (6a) further comprises a second mapping table (13) including a
25 second service terminology and the common terminology, the first work task (7) being transposed by the first mapping table (9) from the first service terminology into

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an input data set in the common terminology, the input data set being marshalled to the second server computer (122) over a common connection (17), and the marshalled input data set being transposed to a second work task (15) by the second mapping table (13) from the common terminology into the second service terminology, and the second work task (15) being processed by the second workflow management system application (4).

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DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name;

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

METHOD OF INTERCONNECTING COMPUTERS AND COMPUTER NETWORK

the specification of which (check one)

X is attached hereto.

was filed on _____ as United States Application Number _____

or PCT International Application Number _____

and was amended on _____ (if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, §119(a)-(d) or §365(b) of any foreign application(s) for patent or inventor's certificate, or §365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application, having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)

Claimed

Priority

98121832.4 Europe 17 November 1998 X Yes

(Number) (Country) (Day/Month/Year Filed)

No Yes

(Number) (Country) (Day/Month/Year Filed)

No Yes

(Number) (Country) (Day/Month/Year Filed)

I hereby claim the benefit under 35 U.S.C. §119(e) of any United States provisional application(s) listed below.

(Application Number) (Filing Date)

(Application Number) (Filing Date)

I hereby claim the benefit under 35 U.S.C. §120 of any United States Application(s), or §365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States, or PCT International application in the manner provided by the first paragraph of 35 U.S.C. §112, I acknowledge the duty to disclose information material to the patentability of this application as defined in 37 CFR §1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

(Application Serial No.) (Filing Date) (Status) (patented, pending, abandoned)

(Application Serial No.) (Filing Date) (Status) (patented, pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that willful false statements may jeopardize the validity of the application or any patent issued thereon.

POWER OF ATTORNEY: As a named inventor I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith (list name and registration number).

Manny W. Schecter (Reg. 31,722), Terry J. Ilardi (Reg. 29,936), Christopher A. Hughes (Reg. 26,914), Edward A. Pennington (Reg. 32,588), John E. Hoel (Reg. 26,279), Joseph C. Redmond, Jr. (Reg. 18,753), Douglas W. Cameron (Reg. No. 31,596), Wayne L. Ellenbogen (Reg. No. 43,602), Stephen C. Kaufman (Reg. No. 29,551), Daniel P. Morris (Reg. No. 32,053), Louis J. Percello (Reg. No. 33,206), Jay P. Sbrollini (Reg. No. 36,266), David M. Shofi (Reg. No. 39,835), Robert M. Trepp (Reg. No. 25,933) and Louis P. Herzberg (Reg. No. 41,500).

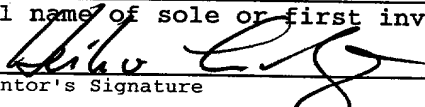
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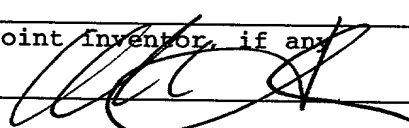
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Heiko Ludwig et al. Docket: 12990 SZ998-043

Serial No.: Unassigned

Dated:

Filed: Herewith

For: METHOD OF INTERCONNECTING COMPUTERS
AND COMPUTER NETWORK

Assistant Commissioner for Patents
Washington, DC 20231

ASSOCIATE POWER OF ATTORNEY AND
REQUEST FOR CHANGE OF MAILING ADDRESS

Sir:

Applicants, by their attorney of record, hereby
grant and Associate Power of Attorney to:

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31,346; KENNETH L. KING, Reg. No. 24,233; STEPHEN D. MURPHY,
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with full power of substitution to prosecute this application and
transact all business in the United States Patent and Trademark
Office in connection therewith.

Applicants further request that all future correspondence
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Respectfully submitted,



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